**Grundfos self-controlled A-class pumps**

Grundfos self-controlled A-class pumps can be used for different purposes inside or outside of conventional or renewable heating appliances and kits.

Self-controlled pumps are reacting on the varying flow in a heating circuit e.g. when the thermostatic valves are opening or closing. The control mode can be different as proportional pressure (reducing the head when the flow decreases) or constant pressure. Even a self adaption can be chosen to start an automatic setting of the right setpoint. A night reduction can be activated. Normally these pumps are installed outside of boilers in installation kits or as stand-alone pumps. ALPHA2 and MAGNA contain high efficiency electronic commutated AC permanent magnet synchronous motors controlled by a frequency controller.

**ALPHA2 pumps** are dedicated for smaller systems with remote control. ALPHA2 pumps are based on the same technology as UPM. You can choose between 4, 5 and 6 m versions using DN 15, 25 or 32 housings in cast iron or stainless steel.

If you want to control the speed of the pump by a remote control signal you can add a module to MAGNA pumps, where you have a 0-10VDC entry. Especially the small MAGNA pumps are fit for cold water applications. For this purpose you can add special cold water insulation shells which are tight for diffusion. The pumps are available with different housings in DN 25, 32, 40 & 50, with pipe or flange connection and in cast iron or stainless steel.

Bigger MAGNA flange pumps are available as in our trade programme. So each heating system can be fitted with the right Grundfos A-class pump to save electricity, resources and emissions.

**Electronically controlled PM pump UPM**

This new version of the Grundfos PWM controlled E-pumps is based on A-class, high efficiency, electronic commutated, AC permanent magnet synchronous motor controlled by a frequency controller. This combination gives the following features:

- Reduced yearly power consumption by more than 70% compared to standard uncontrolled circulators
- Higher efficiency in all speeds compared to voltage controlled asynchronous motors
- Big variance of head: from 1m up to 7m
- Low power consumption: from 6W to 70W

When using the load profile for at stand alone circulator, and controlling it correctly, the yearly average power consumption of a UPM is 30% of a typical standard uncontrolled circulator.

That is a clear “Class A”!
High Efficiency

UPM
The right choice for heating systems with PWM speed controller
- Grundfos PERMANENT MAGNET A-class technology – saves up to 70% primary energy
- Energy-optimised for variable flow and speed – controlled via a PWM-signal
- Extreme high speed range with high efficiency also at low speed
- Low stand by power consumption 1.5 W
- High speed changes < 1 sec possible and constant operation at constant signal
- Return signal available for operation tendence
- For non-condensing environment with medium temperature +15°C to +95°C
- Different housings available in cast iron, bronze or composite with or without additional features as air-venting, diverter valve or alternate connections
- Same motor technology as the A-labelled ALPHA pump.

Gas combi-boiler with UPM:

UPM
7m OEM pump, remote controlled with PWM signal

UPM 15-70

Power Consumption P1

ALPHA2
Self-controlled 4,5 or 6 m A-class pump with different control modes

MAGNA
Self-controlled or remote controlled 6 or 10m A-class pump - fit for cold water